SulTRAC

May 13, 2015

Ms. Shari Kolak
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd., Mail Code: SR-6J
Chicago, Illinois 60604

Subject: Response to Ohio EPA Comments on the Draft Remedial Alternatives Screening Technical Memorandum East Troy Contaminated Aquifer Site, Troy, Miami County, Ohio Contract No. EP-S5-06-02, Work Assignment No. 145-RICO-B5EN

Dear Ms. Kolak:

SulTRAC is pleased to submit responses to comments on the Draft Remedial Alternatives Screening Technical Memorandum.

On February 23, 2015, SulTRAC submitted the Draft Remedial Alternatives Screening Technical Memorandum to the U.S. Environmental Protection Agency (EPA) and the Ohio Environmental Protection Agency (Ohio EPA). On March 27, 2015, SulTRAC received (via e-mail) Ohio EPA comments on the draft technical memorandum. On April 27, 2015, EPA directed SulTRAC to provide written responses to Ohio EPA comments. These responses are to be reviewed by the agencies and, when they concur, SulTRAC will incorporate accepted changes in the draft feasibility study (FS) report rather than revising the technical memorandum.

If you have any questions about the enclosed documents, please call me at (513) 333-3669.

Sincerely,

Guy Montfort
SulTRAC Project Manager

Enclosure (1)

cc: Parveen Vij, EPA Project Officer (letter only)
JD Campbell, SulTRAC Contract Manager (letter only)
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ENCLOSURE

SULTRAC RESPONSES TO OHIO EPA COMMENTS FOR THE DRAFT REMEDIAL ALTERNATIVES SCREENING TECHNICAL MEMORANDUM DATED FEBRUARY 23, 2015 EAST TROY CONTAMINATED AQUIFER SITE, TROY, OHIO

On February 23, 2015, SulTRAC submitted the Draft Remedial Alternatives Screening Technical Memorandum to the U.S. Environmental Protection Agency (EPA) and the Ohio Environmental Protection Agency (Ohio EPA). On March 27, 2015, SulTRAC received (via e-mail) Ohio EPA comments on the draft technical memorandum. On April 27, 2015, EPA directed SulTRAC to provide written responses to Ohio EPA comments. These responses are to be reviewed by the agencies and, when they concur, SulTRAC will incorporate accepted changes in the draft feasibility study (FS) report rather than revising the technical memorandum. Following are SulTRAC's responses to Ohio EPA comments, with the original comment listed first followed by SulTRAC's response in blue italics.

General Concerns

1. Because contamination is impacting a public water supply (PWS), Ohio EPA prefers that contamination be intercepted/remediated before reaching the PWS wells. The continued detection of Chemicals of Concern (COCs) will impact siting of future PWS wells for the City of Troy.

   Response: *Comment noted.*

2. Vapor intrusion (VI) mitigation measures are included as remedial alternatives (section 3.3, page 49). Ohio EPA does not consider vapor mitigation to be a final remedy because it is expected that ground water will be fully restored. Ohio EPA does agree, however, that additional VI mitigation (whether it be preemptive, or based on additional sampling) is necessary at the site. We request that the VI remediation sections specify that, while it is necessary to evaluate the VI pathway in the interim, the final remedy for the VI pathway is the restoration of soils to levels that will not leach to ground water and the restoration of ground water to levels that will not pose a vapor intrusion threat.

   Response: *It is agreed that if VI mitigation is necessary, it is considered a "temporary" or "interim" action and not the final remedy for the VI pathway. The draft FS report will contain language discussing the relationship of the soil, groundwater, and VI remedial components and how they will be integrated into a final comprehensive site remedy.*

3. The use of the term "former dry cleaner property" when referring to the residential plume source area is confusing throughout the document because there are two other former dry cleaner areas (one at the Spinnaker parking lot and one at 432 East Main Street). Please consider changing the reference to better identify the residential plume source area.

   Response: *The FS report will clearly refer to the "former dry cleaner locations" in a manner that avoids this confusion.*

Specific Comments

1. Section 1.2.4.1, page 16-17 and section 2.2, page 35 discusses risks posed by soil contamination and remedial action objectives (RAOs) for soil contamination. These sections do not discuss the soil source at the residential plume. The remedial alternatives evaluated target the residential plume source soils, however, the introductory sections do not indicate that there is a risk that needs to be evaluated. While it may be that soil samples were not able to be collected at the residential plume

source, it should still be discussed in these sections as its absence adds confusion to whether or not the area needs to be mitigated.

Response: *These sections will be revised to state that collection of soil samples from the former dry cleaner source area at 10 East Main Street (beneath the present-day church addition) was not feasible because of access restrictions. Therefore, risks were not confirmed or quantified for soil at this location, and it is conservatively assumed that unacceptable risks exist and that this area warrants mitigation.*

2. Section 1.2.5.1, page 30, bullet points 1-3 – the first 3 bullet points conclude that the East Water Street Plume upgradient area, receptor-specific cumulative soil cancer risks (based on surface and sub-surface soil) are less than or within Ohio EPA's risk range. Please clarify these bullets by specifying that these statements refer to the soil direct-contact pathway only.

   Response: *The draft FS report will contain the requested language.*

3. Section 2.2 proposes protection of ground water preliminary remedial goals (PRGs) at 100 ug/kg for perchloroethene (PCE), trichloroethene (TCE) and 1,1,2-trichloroethane (TCA). These numbers were derived by assuming soil concentrations 20 times greater than the maximum contaminant level (MCL) to account for dilution and attenuation. 100 ug/kg is two orders of magnitude greater than the protection of ground water regional screening levels (RSLs) defined by US EPA for the COCs. Please provide additional information as to why 100 ug/kg is an appropriate PRG for soils.

   Response: *The EPA Regional Screening Level (RSL) protection of groundwater values are based on a dilution attenuation factor (DAF) of 1. This conservative DAF assumes no dilution or attenuation of the chemical as it leaches from soil to groundwater. A DAF of 20 is commonly accepted as a reasonable value. Soil cleanup goals of 20 times the groundwater maximum contaminant levels (MCLs) were proposed because the groundwater cleanup goals proposed are MCLs.*

   The document suggests that site-specific leaching values based on Synthetic Precipitation Leaching Procedure (SPLP) analysis should be used to determine site-specific protection of ground water soil concentrations. Ohio EPA does not believe that the SPLP is an appropriate method to calculate soil leaching to ground water. A brief discussion of the SPLP analysis is provided on page 36, however, additional information should be provided on what this analysis would entail and whether it is appropriate for the site. Is additional sampling required? How will a site-specific dilution factor be calculated? Consideration should be given to determining a site-specific leaching value using other methods such as the partitioning equation.

   Response: *SulTRAC will evaluate and discuss the use of SPLP analysis, partitioning equations, or other appropriate methods for deriving site-specific dilution factors. The draft FS report will state that this information will be obtained during the remedial design phase – likely through a pre-design study.*

4. Section 2.5.1, page 43 discusses estimations of contaminated volumes of soil. There is no discussion of the estimated contaminated soil for the residential plume source. It is necessary to estimate the volume of contaminated soils for remediation technologies, please provide an estimation of the contamination soils for the residential plume.

   Response: *Given that collection of soil samples from the former dry cleaner source area at 10 East Main Street (beneath the present-day church addition) was not feasible because of access restrictions, the presence of residual contamination in the vadose zone is unconfirmed and the volume of soil to be addressed cannot be calculated. For this reason, a very general and conservative estimate of the potentially contaminated volume of soil will be made by assuming an area and a depth*

based on the footprint and slab grade elevations of the present structures in the source area. This estimate will also involve sampling data regarding the width of the groundwater plume immediately downgradient of the source area (based on sampling completed along South Walnut Street). The draft FS report will include text discussing assumptions pertaining to the volume of soil to be addressed in the residential plume source area.

5. Section 2.5.3, page 45:

   a. The area of potential concern for VI was estimated based on historical information and refined during the Remedial Investigation (RI). Ohio EPA recommends revising this statement because, as discussed in previous Ohio EPA comments during the RI, the extent of VI impacts does not necessarily coincide with the upgradient ground water plume boundaries.

      Response: *The draft FS report will include a statement acknowledging that the area of potential VI impacts may not necessarily coincide with the boundaries of the groundwater plume.*

   b. Ohio EPA recommends adding temporal changes in indoor air concentrations and the rate of VI (in addition to temporal changes in ground water concentrations), and preferential pathways resulting from subsurface utilities (in addition to preferential pathways as the result of soil conditions or cracks and openings in the structures themselves) to the list of uncertainties in paragraph 1 of this section.

      Response: *The draft FS report will include the requested statement in the list of uncertainties.*

   c. This section provides an effort to quantify the number of buildings likely containing indoor air concentrations and sub-slab vapor in excess of PRGs. In the final paragraph of the section, it is not clear what is meant by *"approximately 115 homes will be addressed by the site remedy"* – does the term "site remedy" refer to VI mitigation measures (e.g. sub-slab depressurization systems) or does the term refer to ground water restoration? Ohio EPA agrees that it is highly likely that additional homes will need interim remedies until ground water is restored.

      Response: *The draft FS report will clearly state that this estimate refers to VI mitigation measures.*

6. Section 4.1.3.1 and section 5.1.2 discuss a clay or soil cap. In the Feasibility Study (FS), please consider that this alternative may be difficult to implement in the areas of elevated soil contamination in the Hobart and Spinnaker areas shown on Figure 2-1. Except for exposure area 5 (EA5), these areas likely are used as parking lots or experience more vehicle traffic. A soil/clay cap may not withstand the high traffic areas. The only potential area where this remedy may be applicable is EA5, but it is along the top edge of the levee and consideration would need to be given to construction and maintenance in that area and whether this would be allowed by flood control agencies.

   Response: *The draft FS report will include a discussion on the implementability of a clay or soil cap in the Hobart and Spinnaker areas. In addition, the draft FS report will include information on approvals or permits needed for construction of a clay or soil cap. Finally, the draft FS report will include information on maintenance of the clay or soil cap to ensure its protectiveness is maintained.*

7. Section 4.2.3.1, page 64 lists pumping as a process option to contain contaminated ground water. This option is not listed on Figure 4-2.

Response: *The Extraction Wells process option represents pumping. The draft FS report will clarify this information.*

8. Section 4.2.6.2, page 68-69 lists carbon adsorption as a ground water ex-situ treatment option and states that this technology will be retained for further evaluation in the FS. However, it is not listed on the retained process option table on page 71 and is not identified as a retained process option on Figure 4.2.

   Response: *The draft FS report will include this information.*

9. Sections 4.2.7.1 (Discharge to Injection Wells), page 69 and 4.2.7.2 (Discharge to Surface Water), page 70 do not state whether or not the process options will be retained.

   Response: *The draft FS report will clarify that both process options are retained for alternatives development.*

10. Section 4.2.7.1, page 69 discusses discharge of treated water into injection wells. In the FS, consideration should be given as to whether discharge to injection wells is a reasonable option given the proximity to PWS wells. Depending on the treatment process and details, this could change the ground water chemistry and potentially impact the City of Troy's treatment process. Ohio EPA recommends that an evaluation is provided in the FS as to whether this would impact the PWS. In addition, Ohio EPA's Underground Injection Control program should be contacted regarding the potential use of these wells.

    Response: *The draft FS report will mention the underground injection control program and discuss the potential impact of injection on the city's water supply wells.*

11. Section 5.1.4, page 83-86, discusses soil alternative S-4, which includes soil vapor extraction adjacent to the residential plume source area, excavation of contaminated soil from currently unpaved areas at the Hobart and Spinnaker properties, and retention of concrete or asphalt as a cap at areas on Hobart and Spinnaker. Ohio EPA does not consider asphalt a viable capping material. Ohio EPA's Technical Guidance Compendium entitled, "Asphalt Covers to Prevent Leaching at Industrial Sites," August 18, 2003, provides more information on what would be acceptable capping material when paired with an operations and maintenance plan.

    Response: *The draft FS report will include additional design information for the asphalt cap alternative, such as liners and drainage layer materials and thicknesses, to comply with the requirements in "Asphalt Covers to Prevent Leaching at Industrial Sites," August 18, 2003. The asphalt cap alternative would include a discussion of the need for an operations and maintenance plan to ensure protectiveness of the remedy. The draft FS report will state that an O&M plan will be required for the cover and will summarize the key elements of such a plan.*

12. Section 5.1.4.1, page 83 discusses the effectiveness of soil alternative S-4 and states that contaminated soil would be extracted from the former dry cleaner property. This appears to be an error and should reference soil vapor extraction. It also appears that the mention of "monitored natural recovery" is an error as well.

    Response: *The draft FS report will provide the appropriate discussion of extraction of soil vapors and will delete the reference to monitored natural recovery.*

13. Alternatives 5.2.2, page 87, 5.2.3, page 88, 5.2.6, page 92, and 5.2.7, page 93 propose monitored natural attenuation (MNA) as a ground water remedy once active remediation has reduced concentrations to 5 to 20 times their remediation goals. MNA would rely on biodegradation, dilution and dispersion processes. For evaluating MNA, please consider that currently the aquifer shows little to no degradation of contaminants occurring and biodegradation would likely need some

enhancements. In addition, Ohio EPA does not encourage dilution or dispersion as attenuation remedies, which would be the main attenuation processes taking place if conditions are not conducive to biodegradation. Lastly, the risk to the PWS wellfield should be evaluated as a part of these alternatives.

Response: *Alternatives described in Sections 5.2.2 and 5.2.3 address the residential area plume. Both alternatives employ bioremediation and would induce reducing conditions downgradient of the targeted treatment area, encouraging natural biodegradation. Alternatives described in Section 5.2.6 and 5.2.7 address the Water Street plume. They both intentionally avoid biodegradation because it would produce daughter products that could affect the city's water supply wells. The low levels of contamination that remain after source area treatment should dissipate readily because most of the contaminant mass outside the source likely exists in the dissolved phase. These factors related to MNA will be discussed in the draft FS report.*

14. Section 4.2.4.2, page 73-74 and alternatives 5.2.4, page 89 and 5.2.7, page 93 provide information on in-situ chemical oxidation (ISCO) but note that there is concern when using this technology in the vicinity of PWS wells. Alternative 5.2.7 is proposed for the East Water Street plume, so it would be in close proximity to the PWS wells. In addition, it would be difficult to implement for multiple reasons (urban setting, source area access, cost) and additional data would have to be collected regarding the nutrient demand. It is also important to note that ISCO often requires multiple events. Please carefully consider the likelihood of success/effectiveness of this alternative in the FS.

    Response: *The comment is noted. It should be possible to ensure that an ISCO remedy would not affect the PWS wells. ISCO would involve continuous injection rather than several discrete injection events.*

    In addition, similar to alternatives 5.2.2 and 5.2.3, MNA is proposed for these alternatives as a remedy once active remediation has reduced concentrations to 5 to 20 times their remediation goals. However, it is likely that the ISCO would prevent biodegradation from occurring, and MNA would rely on dilution and dispersion processes. As noted above, Ohio EPA does not encourage dilution or dispersion as attenuation remedies, which would be the main attenuation processes taking place if conditions are not conducive to biodegradation. Lastly, the risk to the PWS wellfield should be evaluated as a part of this alternative.

    Response: *This alternative will evaluate risk to the PWS wells. There would be less risk of impact to the wells if biodegradation were discouraged. As indicated earlier, the residual plume should dissipate readily after source area treatment.*

15. Alternatives 5.2.2, page 87, 5.2.3, page 88, 5.2.4, page 89 propose to treat the plume with enhanced reductive dechlorination (ERD), in-situ chemical reduction (ISCR), or ISCO. In the FS, please evaluate how the depth of the contamination in the residential area plume would impact these remedies.

    Response: *The depth of contamination will be considered and discussed.*

16. Appendix A, Calculation of Risk-Based Remediation Goals for Soil, Groundwater, and Indoor Air, page 15 of the Memo: On page 15 of the Memo, the text states that the presence of chemicals not likely related to the sources of the chlorinated Volatile Organic Compounds (VOCs) was evaluated during the Phase I of the RI to determine if other chemicals were present at concentrations high enough to affect the calculation of human health or ecological risk at the site and thus would be considered COCs. However, Appendix A states that trihalomethanes will not be considered COCs even though they are present at concentrations high enough to affect the calculation of human health risk at the site. Please explain why trihalomethanes are not being retained as COCs.

Response: *The remedial investigation (RI) report, the human health risk assessment, and Appendix A of the technical memorandum have consistently stated that the trihalomethanes detected during the RI are not believed to be site-related (not associated with dry cleaning operations). Therefore, establishing remedial action objectives (RAOs) and cleanup goals for the site-related COCs (PCE, TCE, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride) is protective of human health and the environment with respect to the objectives of the RI. Further discussion between SulTRAC and the agencies is needed if it is Ohio EPA's position that the site remedy should also address trihalomethanes.*

17. Appendix B, Preliminary Identification of Applicable or Relevant and Appropriate Requirements: Ohio EPA has identified preliminary Applicable or Relevant and Appropriate Requirements (ARARs) on the attached Microsoft Excel file. Some of the state ARARs listed in Appendix B are also in the provided Excel file, for simplicity, Ohio EPA is providing an all-inclusive list of the state ARARs specific to ETCA. In addition, there were numerous state ARARs identified in Appendix B that had incorrect citations (Ohio Revised Code was referenced when the requirement is found under the Ohio Administrative Code).

Response: *The draft FS report will include the all-inclusive list of state ARARs provided by Ohio EPA in the appropriate appendix.*

APPENDIX B

PRELIMINARY IDENTIFICATION OF APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

TABLE 1
SUMMARY OF POTENTIAL FEDERAL ARARS FOR ETCA SITE

Requirement	Prerequisite	Citation	Comment
CHEMICAL-SPECIFIC			
Effluent limitations on point source pollutant discharges to waters of U.S.	Groundwater Discharge to Surface Water	CWA of 1977 33 U.S.C. Subsection 1251, et seq.	RI results show groundwater does not discharge to surface water
Establishes MCLs, which are health risk-based standards for public water systems.	Surface water is current or potential source of drinking water	SDWA of 1974 40 CFR 141 and 142	All residents supplied by municipal system; Troy prohibits private wells for potable uses, allows wells agricultural irrigation
Establishes welfare-based secondary standards for public water systems.	Surface water is current or potential source of drinking water	SDWA of 1974 40 CFR 143	All residents supplied by municipal system; Troy prohibits private wells for potable uses, allows wells agricultural irrigation
LOCATION-SPECIFIC			
No adverse impact to a wetland	Remedial action within an on-site wetland or disturbance to off-site wetland	CWA of 1977 40 CFR 6.302(a) Appendix A	No wetlands are on-site or within the footprint of the plume (reference: National Wetlands Inventory,2014)
Facility must be designed, constructed, operated, and maintained to avoid washout.	RCRA hazardous waste; treatment, storage, or disposal of hazardous waste within a 100-year floodplain	40 C.F.R. 264.18(b)	ETCA is not located within the 100-year flood plain
Preservation of historic or prehistoric resources (including structures) in National Historic Register sites.	Site (or structures) listed in National Register of Historic Places	NHPA of 1966 16 U.S.C. Subsection 470 et seq.	Site (or on-site structures) not listed in Register
ACTION-SPECIFIC			
Minimum design and operation criteria for land disposal of solid wastes	Regulated solid waste disposal unit	40 CFR 257 Subpart A	No regulated units currently on site; substantive requirements may be relative and appropriate for certain alternatives
Site closure, operation and maintenance, monitoring and record-keeping at regulated waste units	RCRA Regulated Hazardous Waste Unit	40 CFR 264.18	The ETCA site is not a RCRA,hazardous waste regulated unit; no hazardous waste has been identified on site
Requirements for Corrective Action Management Unit (CAMU) at RCRA-permitted transportation, storage, and disposal facilities undergoing corrective action.	Creation of a Corrective Action Management Unit (CAMU)	40 CFR Part 264.552	No hazardous waste has been identified on site
Land disposal restrictions (LDRs) prohibit disposal of hazardous waste unless treatment standards are met.	Disposal of hazardous waste on site	40 CFR 268.1	May be relevant and appropriate if RCRA - characteristic waste is generated as part of alternative

TABLE 2
SUMMARY OF POTENTIAL STATE ARARS FOR ETCA SITE

Requirement	Prerequisite	Citation	Comment
CHEMICAL-SPECIFIC			
Monitoring requirements for inorganic and organic contaminants	Contaminated ground or surface water being used, or has potential for use as a drinking water source	OC, DW Section 3745-81-23, 24, 27	All residents supplied by municipal system; Troy prohibits private wells for potable uses, allows wells agricultural irrigation
LOCATION-SPECIFIC			
Definition of Ohio plant species considered threatened or endangered.	Threatened or endangered plant species on site	ORC, ODNR Section 1501-18	Based on habitat preferences and their known distribution, more than one threatened or endangered species may be present at the site
Requirements for building or altering a dam, dike or levee; monitoring, maintenance, and operation of dams, dikes and levees.	Presence of dams, dikes, levees; or remedy that includes building or altering one	ODNR 1501.21	Dams and levees are present on or near the site
Definition of Ohio animal species considered threatened or endangered	Threatened or endangered animal species on site	ORC, ODNR Section 1501-31	Based on habitat preferences and their known distribution, more than one threatened or endangered species may be present at the site
Prohibits removal or destruction of threatened or endangered plant species.	Threatened or endangered plant species on site	ORC, ODNR Section 1518.02	Based on habitat preferences and their known distribution, more than one threatened or endangered species may be present at the site
Requirements for building or altering a dam, dike or levee; monitoring, maintenance, and operation of dams, dikes and levees.	Presence of dams, dikes, levees; or remedy that includes building or altering one	ODNR 1521.06, and .062	Dams and levees are present on or near the site
Prohibits removal or destruction of threatened or endangered animal species.	Threatened or endangered animal species on site	ODNR, ORC, Section 1531.25	Based on habitat preferences and their known distribution, more than one threatened or endangered species may be present at the site
Restricts hazardous waste siting in flood hazard area	Hazardous waste is located or will be treated at the site	Ohio Revised Code (ORC) 3734.05	No hazardous waste identified at ETCA

Requirement	Prerequisite	Citation	Comment
Establishes water use designations for stream segments within the Great Miami River basin to establish waste load allocations.	Direct discharge to Great Miami River	ORC, DSW Section 3745-1-21	Water use designation for Great Miami River near site has been established;
Lists criteria to be protected in wetland environments.	Remedial action within an on-site wetland or disturbance to off-site wetland	ORC, DSW Section 3745-1-51 (A-C)	No wetlands are on-site or within the footprint of the plume (reference: National Wetlands Inventory,2014)
Wetland classification; avoidance, minimization of wetland damage, and compensatory mitigation	Remedial action within an on-site wetland or disturbance to off-site wetland	ORC, DSW Section 3745-1-54 (A-D)	No wetlands are on-site or within the footprint of the plume (reference: National Wetlands Inventory,2014)
Requirements for groundwater well siting and construction	New groundwater monitoring or production well	ORC, GW Section 3745-9-03, -04, -05, -06, -07	Substantive requirements may be relative and appropriate for remedies including well construction
Prohibition of nuisances (smells, refuse, oil, filth) into lakes, streams, drains; prohibits obstruction of waterways	Investigation, design or construction activities adjacent to or in lakes, streams, drains, waterways	ORC, APC, DSW Section 3767.13 and .14	Substantive requirements may be relative and appropriate for alternatives near or in these waterbodies
Conservancy district board may make and enforce rules and regulations pertaining to channels, ditches, pipes, sewers, etc.	Construction within a Conservancy District	DSW 6101.19	Substantive requirements may be relative and appropriate to alternatives constructed within Miami Conservancy District
ACTION-SPECIFIC			
Prohibits violation of Ohio air pollution rules	Presence of air emissions from site	ORC, APC, HW Section 3704.05	Air emissions have not been measured from the site
Prohibits filling, grading, excavating, building, drilling, or mining on land where unauthorized hazardous waste or solid waste facility operated	Unauthorized hazardous or solid waste facility operation on site.	ORC, HW Section 3734.02 (H)	No hazardous or solid waste facility (authorized or unauthorized) operated at ETCA.
Specifies analytical methods and collection procedures for surface water discharges.	Discharge to surface water	ORC, DSW Section 3745-1-03	Substantive requirements may be relevant and appropriate if alternatives involve discharge to surface water
Water quality discharge criteria for pollutants without specific numerical or narrative criteria	Discharge to surface water	ORC, DSW Section 3745-1-07	Substantive requirements may be relevant and appropriate if alternatives involve discharge to surface water
Restricts emissions of fugitive dust.	Fugitive dust emissions from on-site remedy	ORC, APC Section 3745-17-08 (A1, A2, B, D)	Substantive requirements may be relative and appropriate for on-site alternatives

Requirement	Prerequisite	Citation	Comment
Specifies substantive criteria for Section 401 water quality criteria for dredging, filling, obstructing, or altering waters of the state.	Dredging or other construction in waters of the state	ORC, DSW Section 3745-32-05	Substantive requirements may be relevant and appropriate if alternatives involve dredging or other construction in waters of the state
Establishes general permit conditions applied to all hazardous waste facilities in Ohio; this includes conditions such as operation and maintenance, site access, and monitoring.	Presence of permitted hazardous waste unit	ORC, HW Section 3745-50-44, and -80	The ETCA site is not a hazardous waste regulated unit; no hazardous waste has been identified on site
Requirements for closure and post-closure care of hazardous waste facilities	Presence of hazardous waste facility	ORC, HW Section 3745-55-11 and 17	The ETCA site is not a hazardous waste regulated unit; no hazardous waste has been identified on site
Design and operating requirements for landfills (liner, leachate collection, and removal run-on/run-off control)	Presence of landfill, waste remaining on site	ORC, HW Section 3745-57-03 and -10	Some substantive requirements may be relevant and appropriate if waste is consolidated or left on site
Prohibits polluting waters of the state.	Discharge of contaminated groundwater or surface water from site	ORC, DSW Section 6111.04 and .07	Substantive requirements may be relative and appropriate for alternatives involving discharge to waters of the state

Notes:

APC	=	Air Pollution Control
ARAR	=	Applicable or relevant and appropriate requirement
CFR	=	Code of Federal Regulations
CWA	=	Clean Water Act
DERR	=	Department of Environmental Response and Revitalization
DSW	=	Division of Surface Water
ESA	=	Endangered Species Act
FCA	=	Flood Control Act
HW	=	Hazardous Waste
NHPA	=	National Historic Preservation Act
OAC	=	Ohio Administrative Code
ODNR	=	Ohio Department of Natural Resources
Ohio EPA	=	Ohio Environmental Protection Agency
ORC	=	Ohio Revised Code
RCRA	=	Resource Conservation and Recovery Act
U.S.C.	=	United States Code
U.S. DOT	=	United States Department of Transportation
U.S.C.	=	United States Code